

Ayushi Tiwari

4th Year Undergraduate | Civil Engineering | National Institute of Technology – Trichy

Email: ayushibook@gmail.com

Address: Plot A/32, Meenakshi Nagar, Durg, Chhattisgarh

Date of Birth: 19-07-1995

Phone: +919489919476

Languages: English, Hindi

Career Objective

To devote career to advance research, teaching or technical work focusing on planning design and analysis of Civil systems

Educational Qualifications

Degree	Year	Institution	GGPA/Percentage
Bachelor of Technology, Civil Engineering (From 2012)	Graduating in 2016	National Institute of Technology, Trichy, India	CGPA- 9.39/10
All India Senior School Certificate Examination, Central Board of Secondary Education (Major- Physics, Chemistry, Mathematics and Computer Science)	2010-2012	Vishwadeep Sr. Sec. School, India	94.6%
All India Secondary School Examination, Central Board of Secondary Education (Major- Physics, Chemistry, Mathematics, Social Sciences, English)	2008-2010	Vishwadeep Sr. Sec. School, India	CGPA-10/10

Technical Skills

Operating System – Windows 10, Windows 8, Windows 7, Windows XP

Software - MATLAB, GeoPIV, PLAXIS, STAAD, FLAC, ABAQUS, AutoCAD, Microsoft Office

Programming Languages -Java, C++, C, HTML, JavaScript and PHP

Work Experience

➤ **Topic: Application of Backfill in Underground Mines**

Duration: 12th May 2015-06th August 2015

Guide: Dr. Li LI, Geotechnical and Mining Laboratory, Civil Engineering, Ecole Polytechnique De Montreal, Montreal Canada

- Worked on establishing a critical relation between Poisson's Ratio and Friction Angle
- Carried out a numerical method simulation using FLAC software
- Compiled Literature Work on different methods of application of Geotechnics in Mining Backfill
- Cross- Checking of the obtained relation using Laboratory tests.

➤ **Topic: Settlement analysis of a bridge abutment**

Duration: May 2015-October 2015

Guide: Dipl.-Ing. Stefan Vogt, Geotechnical Laboratory, Civil Engineering, Technische Universität München, Munich, Germany

- Worked on evaluating several foundation systems in terms of their load bearing behavior and soil-structure interaction.
- Analysis of Bridge Abutment through PLAXIS and AutoCAD.
- Simulation was designed for three phases with three different soil conditions and combinations of preloading and soil improvement.
- Compiled Literature Work on different settlement results and its various applications.

➤ **Topic: Small Strain Stiffness of Geomaterials**

Duration: 20th May 2014-10th July 2014

Guide: Dr. Ashish Juneja, Geotechnical Laboratory, Civil Engineering, IIT Bombay, India

- Worked extensively on Bender elements to calculate the small strain stiffness of Geomaterials which included both basalt rock and kaolin clay.
- Developed programs for working on one of the methods to calculate travel time using bender elements.
- Carried out bender element testing under different consolidation and cell pressure.
- Carried out significant work on soil deformation using image correlation and particle velocimetry.
- Well-equipped in software's like MATLAB, ABAQUS, GeoPIV and STAAD Pro.
- Compiled Literature work on bender elements concerning small strain stiffness and image correlation

➤ **Topic: Importance of Water Correction in Fine Manmade Powder Materials for Concrete**

Duration: 01st December 2013-15th January 2014

Guide: Dr. Supratic Gupta, Concrete Engineering Laboratory, Civil Engineering, IIT Delhi, India

- Worked extensively on utilization of Flyash in composition of Concrete.
- Conducted technical surveys on Delhi Metro Railway Corporation sites as Proof Checking of the project.
- Worked on water correction importance in Concrete Materials.
- Conducted Literature Review of the fine materials and flyash utilization.
- Published a journal paper under the same topic.

Courses Covered:

- Geotechnical Engineering, Foundation Engineering and Earthquake Engineering.
- Mathematics and Numerical Methods

- Concrete Technology
- Structural Analysis, Mechanics of Solids, Design of Concrete Structures, Design of Steel Structures, Advanced Strength of Materials, Matrix Methods of Structural Analysis, Structural Dynamics and Prestressed Concrete Structures.
- Environmental Engineering, Water Resources Engineering and Model for Air and Water Quality.
- Mechanics of Fluids, Hydraulic Machinery and Hydraulic Structures.
- Surveying, Estimation Costing and Valuation.
- Transportation Engineering.
- Building Planning and Drawing Lab, Strength of Materials Lab, Survey Lab, Geotechnical Engineering Lab, Environmental Engineering Lab, Hydraulic Machinery Lab and Computer Aided Design Lab.

Honours and Awards

- ***Institute of Engineering and Technology (IET)*** (August 2014)
The scholarship is aimed at promoting academic and leadership excellence and is awarded to 16 meritorious students from premier engineering and management institutions who have the potential to become leaders in entrepreneurial excellence and innovation.
- ***Mitacs Globalink Research Award*** (December 2014)
The Research Award enables students from 8 different countries to undertake research in their field of interest at Canadian universities for duration of 12 weeks.
- ***DAAD WISE (Working Internships in Science & Engineering)*** (February 2014)
Provides full scholarship to students pursuing Bachelor degree/ Dual degree/ integrated programmes in subjects like engineering, mathematics, natural sciences etc. from selected universities in India and other countries to undertake 2-3 months internship at institutions of higher education and research institutes in Germany
- ***INSPIRE Scholarship*** (May 2012)
This scholarship is aimed at providing financial assistance for meritorious students in Science Programmes.

Design Competitions

- ***SANGAM exhibition of PRAGYAN'14, The International Techno-Management Festival of NIT Trichy (February 2014)***
Secured 3rd position out of 15 teams in Innovative Model Display Competition. Designed a Bascule Bridge, suitable for Large Ships to pass underneath, weighed the least and had the highest strength. A Coilgun, projectile accelerator, was also designed in another Project Display Competition and received a special mention by the judges.
- ***Civilization' 14, A National Level Tech Symposium of Anna University, Chennai (April 2014)***

Won 1st position in **Project Display, Tech Quiz and Walk-In** events out of several hundred participants of the symposium

Scholastic Achievements

- Awarded **IET** (Institution of Engineering and Technology) **scholarship** for proposing innovative solutions on Solid Waste Management in July 2014.
- Obtained **AIR 48** in National Wide Education & Scholarship Test (**NEST- 2013**).
- Won 1st position in the **On Campus Tech Quiz** at Moments'13- National Level Technical Symposium of Department of Civil Engineering, NIT Trichy.
- Awarded 2nd Prize in State-Level Quiz competition organized by BSNL Networks in September 2012.
- Awarded **Special Merit Certificate** for being among the top **0.1 percent** of successful students of AISSE 2010 and AISSCE 2012.
- Secured **All India Rank 4952** out of 570,000 students in the IIT-Joint Entrance Examination 2012.
- Secured **All India Rank 5357** out of 1.1 million+ students in AIEEE 2012.

Positions of Responsibility

- **Coordinator** of Marketing and Content Team of Penumbramag, an online magazine and blog on widespread areas of politics, technology and sports. (**February 2013-May 2014**)
- **Cultural Secretary** of Aayaam, Hindi Literature Cell of NIT Trichy. (**July 2013- Present**)
- **Manager** of FSR (Festember Social Responsibility) team of Festember National Level annual cultural festival of NIT Trichy. (**April 2013- Present**)
- **Head** of Workshops Team'14 of Pragyan, an international techno-management festival of NIT Trichy. (**October 2013- Present**)
- **Coordinator** of Hindi Literature Team of Nittfest'14, an annual inter-collegiate cultural fest of NIT Trichy. (**April 2013- April 2014**)
- **Manager** at Moments'14, the annual technical department symposium of NIT Trichy. (**April 2013- February 2014**)
- Held the position of **School Head Girl** in academic year 2011-12

Extra-Curricular Activities

- **Delegate** of Syria at MUN-Appulse'14 held at NIT Trichy.
- Performed a 14000 feet **Skydive Tandem Jump** in Farnham, Quebec, Canada.
- Won **Inter-NIT Basketball** tournament representing college team of NITT
- Won **Cricket and Football** championship at Sports Fete'13 of NIT Trichy.
- Attended a workshop in **Archery and Rifle Shooting** organized by Madurai Club Association.
- Student Member of **AISCE** (American Society of Civil Engineers) and **ICE** (Institution of Civil Engineers)

Hobbies

Travelling, Trekking, Blogging, Adventure Sports, Dancing